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Contribution

My Experience in Florida

Yoshiaki Ichino

Fort Lauderdale is located in the south end of the Florida peninsula of the US. I had an opportunity to stay there for a month while I commuted in a car to a research laboratory of a private company there as an assignee from TELEC. What follows is small three stories about the experience of me there with poor English conversation skills.

One day laboratory manager "B" invited me and five colleagues of the laboratory to a nearby Japanese sushi restaurant for dinner. The owner of the restaurant were a Japanese couple with whom I exchanged greetings in Japanese while feeling somewhat relieved. I was impressed with the fact that Japanese couple are running a restaurant in such a faraway place. Sushi and shoyu served there were completely the same as those served in Japan in their make and tastes. I imagined that it is hard for them to get the materials for the food there. While we

were enjoying eating sushi Lab manage "B" pointed his finger to a dish brought in by a cook and said out loud "Stone crab." Its shape was surly of a crab but its shell was very hard like a stone as its name implied, but it tasted very good! When we left the restaurant there was another surprise waiting for me. To my question to the couple on their home town in Japan they said "Hamamatsu, Shizuoka-ken." In no time I told them that I was born in Shimizu, Shizuoka prefecture. It was a coincidence that I met people from the same hometown in such a faraway place. We laughed together on our happy coincidence.



With the owner couple of the Sushi restaurant

Now we were in the south most location of the US, where small islands scattered into the south-east directions with Key West Island in the westernmost locations. All those islands were connected by bridges. On a holiday we

went south toward Key West by consulting maps by tossing coins into metal gatemachines one after another. We passed Miami, which Mr. K advised to go, and reached Key Largo by crossing the bridge from the southmost point of the peninsula. The island was flat all the way with marshland here and there with a line of houses running. The far left side must be the sea. We ran quite sometime so we wanted to see the sea again, so we turned left into alley of everyday road but it was dead end in front of a big gate. So we went back to the incoming load



Kew West is still far ahead

again, but we faced another dead end there. We repeated this maze circling for some time and finally we saw the sea ahead over a wall. It seemed the left side beach of Key Largo was allocated to private use. We gave up this way of searching sea views and just went ahead. Then there appeared was a beach where many people were enjoying their activities on the beach, by the scenery of which we were finally relieved and we rested there for a while. "Bravo!" After that we returned to the driving ahead, crossing bridges one after another, but it seemed Key West was still far ahead and it was time for us to get back to our great regret. While we failed to conquer Florida, the fact will remain that we almost reached the southmost point of the USA with which we should be satisfied.

In one evening we were invited to the house of Mr. M, a researcher. He took us in his car to his place which seemed near the water. Following greeting with his family in the living room of his house he said "Let' go. I thought he would take us somewhere in his car, but this surmise was entirely wrong. He took us to the basement where a cruiser was moored at a private boarding point, what a surprise! Mr. M led us into his cruiser while we were perplexed. After that we were just seeing the scenery from onboard the cruiser he sailed. The scenery across the river in the twilight was very soothing with various house lights came and went by one after another. The place the cruiser stopped was where a restaurant stands. Going to a restaurant by a boat was beyond my imagination.

But the surprising story did not end there. While we were enjoying drinking alcohol there came cuisine which looked lime steak. The host urged us to start eating the meal. To my question what the meat was the host replied "alligator." I thought "what?!" but carefully used my knife and ate the meat. Tender and tasted like chicken without stink or taint! It tasted like chicken, I thought. Mr. K told me there were many alligator in Florida but I never even imagined people eat their meat! Even today I still remember its feeling on my tongue.



With Mr. M (second from the left), folks and the boat

Yoshiaki Ichino



April 1964	Radio Wave Research Laboratory of the MPT
June 1995	Retired after Manager of Devise section manager, Communication Research Laboratory
July 1995	MKK (now TELEC)
September 2006	Director of TELEC
September 2008	Retired after assuming councilor TELEC



• Board of Directors

Date	June 13, 2017
Agenda items	The 30 th VCCI Board of Directors
	• Agenda item 1. Business report for FY2016 (draft)
	• Agenda item 2. Settled account report for FY2016 (draft)
	• Agenda item 3. Call for the FY2017 scheduled VCCI Council
Decisions made	• Agenda item 1. Approved
and reports given	• Agenda item 2. Approved
	• Agenda item 3. Approved
	• Reporting item 1. On the candidates for councilors, directors and dedicated secretary
Date	July 4, 2017
Agenda items	The 31 st VCCI Board of Directors
	• Agenda item 1. Appointment of the VCCI executives
Decisions made	• Agenda item 1. Mr. Kawakami was approved as Managing director and Mr. Oda was
and reports given	approved as Executive director as proposed

• Council

Date	July 4, 2017
Agenda items	The 11 th meeting
	• 1. Report on the business results of FY2016
	• 2. Review of draft FY2016 settlement of account
	• 3. Deliberation on reappointment of councilors, directors and the inspector
Decisions made	• Agenda item 1. Approved as proposed
and reports given	• Agenda item 2. Approved as proposed
	• Agenda item 3. Approved as proposed
Date	July 4, 2017 (on the same day for the 11 th meeting)
Agenda items	The 12 th meeting
	• 1. Appointment of the Chair of the VCCI Council
Decisions made	• Agenda item 1. Appointed Mr. Masamitsu Tokuda as the Chair of the VCCI Council
and reports given	

• Steering Committee

Dates	April 19, May 24, June 21 and July 19, 2017
Agenda items	• 1. Draft business report of FY2016
	• 2. Statement of settlement for FY2016
	• 3. Admitted members in April – June
	• 4. Three sets of guidance on VCCI rules based on CISPR 32
	• 5. FAQs on the VCCI rules based on CISPR 32
Decisions made or	• Agenda item 1. Approved
report given	• Agenda item 2. Approved
	• Agenda item 3. Accepted applied new VCCI members
	• Agenda item 4. Approved
	• Agenda item 5. Approved
	• Reporting item 1. Quarterly report of April to June of VCCI subcommittees
	(Technical, International, Market Sampling Test, Communication and Education and
	training)
	• Reporting item 2. The statistics on administrative matters (membership changes and
	the number of conformity verification report filed) for the reporting period)
	• Reporting item 3. Budgetary status for the quarter (April – June)
	• Reporting item 4. The gist of the meetings of the Councilors and Board of Directors
	• Reporting item 5. The VCCI Taipei workshop in June
	• Reporting item 6. The summary of the business report meeting for FY 2016 held in
	July
	• Reporting item 7. The gist of VCCI seminar for the Gunma Tohmoh Industrial
	Technology Center held in July

• Technical Subcommittee

Dates	May 12 and July 12, 2017
Agenda items	• 1. Activities in FY2016 of Technical Subcommittee and WGs under it
	• 2. Validation of influence of emissions radiated by EUT with wireless communication
	features
	• 3. Impact to the results of the measurement of wireless communication equipment
	using the same band width as that of conducted emission measurement
	• 4. Method of calibration of the free space antenna factor
	• 5. Proposal on the standardization of VHF-LISN in CISPR
	• 6. Effectuation of the 3 sets of the guidance
	• 7. Report on the CISPR Phoenix meeting
Pending business	• Agenda items 2 through 5 and item 7
Decisions made or	• Agenda item 6
report given	Released the three sets of guidance on the VCCI Website.
	• Reporting item
	Presented VCCI papers in APEMC 2017 held in Seoul, Korea held from June 20 to
	23, 2017 (refer to the associated article in another part of this issue of VCCI Dayori)

• International Relations Subcommittee

Dates	May 11, June 9 and July 14, 2017
Agenda items	• 1. Update of the reference material on the direction of EMC standard in the world
	• 2. Study of EMC regulations in the world
	• 3. Plan on the VCCI International Forum 2017
Pending business	• Agenda item 1.
0	• Agenda item 2. Preparation for the study
	• Agenda item 3. Planning and preparation for the 2017 International Forum
Decisions made or	• Agenda item 1. Updated the ITE related standards in the world on March 30
report given	• Agenda item 2. Visited the EU Commission for overseas study and information
	exchange. The report was posted in the members' page of the VCCI site. See the
	report in this issue of VCCI Dayori
	• Agenda item 3. Will hold the VCCI International Forum of this year in CEATEC
	Japan of the Makuhari Messe on October 6 with invited speakers from EU
	Commission, GSO and BSMI

• Market Sampling Test Subcommittee

Dates	May 12, June 9 and July 7, 2017
Agenda items	• 1. Document inspection
	• 2. Treatment of members rated as Failed tentative
	• 3. Visitation to Taipei testing laboratories
	• 4. Policy setting for the sample selection
	• 5. Fact-finding survey on VCCI mark indication on ITEs in the market
	• 6.Market Sampling Test of products of non-VCCI members
	• 7. Business report meeting for FY2016
Pending business	• Agenda item 6. Testing of non-VCCI members' products may incur unexpected cost,
	so this issue should be on the table of study for a while.
Decisions made or	• Agenda item 1. One of the two suspicious cases remaining pending was closed as a
report given	report of retesting was provided. 10 cases allocated this year for inspection contained
	those with the mismatch of the type name and wrong descriptions. The owners were
	asked for the correction
	• Agenda item 2. Of the two cases of failure in FY2016 one was proven to be caused by
	the failure of the sampled product only and the other was corrected with the change of
	HDMI cables, which VCCI accepted.
	• Agenda item 3. Visited three testing labs in Taipei for reference in taking advantage of
	visiting the workshop of COMPUTEX TAIPEI. Useful and informative were
	information exchange meetings there.
	• Agenda item 4. VCCI will conduct 100 cases of Market Sampling Tests in this fiscal
	year. Our focus will be on products in the new field and products tested in labs
	overseas.
	• Agenda item 5. Sent a letter of the worming message to five manufactures supplying
	their products with the VCCI mark indicated on them without joining VCCI. We
	pointed out to then that their deed is a violation to the registered trade mark law and
	we recommended they join VCCI.
	• Agenda item /. Presented the results of Market Sampling lests in FY 2016 and

• Education Subcommittee

Dates	May 17, June 14 and July 28, 2017
Agenda items	• 1. Revisit to the texts for education and training programs for FY 2017
	• 2. Plan on the development of texts for education and training programs for FY 2018
	• 3. Revisit to the policy on loaned equipment for the purpose of education and training
Pending business	• Agenda item 1. Continue the considerations on the course texts for CISPR 32 based
	education to be implemented.
	• Agenda item 2. Continue the development of policy and texts for the courses on
	"Uncertainty in EMI measurement" and "Measurement of emissions above 1GHz"
	which are planned to be newly started in FY 2018.
	• Agenda item 3.
Decisions made or	• Completed the revisit to the text of "The basic course" for the training of
report given	measurement engineers planned to be started in FY 2017. As to the course details of
	hands-on training for measurement engineers, meetings with lecturers were held on
	the contents of both for lectures and hands-on training and came up with additional
	and modified items for improvements.

• Communication Subcommittee

Dates	May 12, June 23 and July 7, 2017
Agenda items	• 1. Report on the VCCI participation in Techno Frontier 2017
	• 2. Report on the participation in COMPUTEX TAIPEI 2017
	• 3. 2018 Calendar
	• 4. Renewal of the VCCI promotion videos
Pending business	• Agenda item 3: Considered a poster-type calendar with the list of new VCCI
	standards printed
	• Agenda item 4
Decisions made or	• Agenda item 1: A report was given on the VCCI participation
report given	• Agenda item 2: A report was given on the VCCI participation. See the body of this
	issue of Dayori

Date	May 22, 2017
Agenda items	Reviewed the result of deliberations by the Measurement Facility Examination WG and
	concluded as follows
Decisions made	Conformity certified (including cases certified with qualification comments after checking
and items	of supplementary papers); 13 companies
completed	Radiated EMI measuring facilities; 13
	Mains ports conducted EMI measuring facilities; 8
	• Telecommunication ports conducted EMI measuring facilities; 7
	• Radiated EMI measurement facilities above 1GHz; 2
	Applications returned with comments; none
	Applications carried over to the next meeting; none
Date	June 15, 2017
Agenda items	Reviewed the result of deliberations by the Measurement Facility Examination WG and
	concluded as follows
Decisions made	Conformity certified (including cases certified with qualification comments after extra
and items	paper checking); 15 companies
completed	Radiated EMI measuring facilities; 5
	Mains ports conducted EMI measuring facilities; 7
	• Telecommunication ports conducted EMI measuring facilities; 4
	• Radiated EMI measurement facilities above 1GHz; 10
	Applications returned with comments; none
	Applications carried over to the next meeting; 2
Date	July 24, 2017
Agenda items	Reviewed the result of deliberations by the Measurement Facility Examination WG and
	concluded as follows
Decisions made	Conformity certified (including cases certified with qualification comments after extra
and items	paper checking); 18 companies
completed	Radiated EMI measuring facilities; 9
	 Mains ports conducted EMI measuring facilities; 10
	 Telecommunication ports conducted EMI measuring facilities; 8
	• Radiated EMI measurement facilities above 1GHz; 2
	Applications returned with comments; none
	Applications carried over to the next meeting; none

Measurement Facility Registration Committee

Abbreviation	Full Name
AAN	Asymmetric Artificial Network
AMN	Artificial Mains Network
ANSI	American National Standards Institute
APD	Amplitude Probability Distribution
APLAC	Asia Pacific Laboratory Accreditation Corporation
AQSIQ	General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China
BSMI	Bureau of Standards, Metrology and Inspection
CALTS	Calibration Test Site
CB	Certification Body
CB	Competent Body
CCC	China Compulsory Product Certification
CD	Committee Draft
CDN	Coupling Decoupling Network
CDNE	Coupling Decoupling Network for Emission
CDV	Committee Draft for Vote
CEMC	China Certification Center for Electromagnetic Compatibility
CEN	European Committee for Standardization
CENELEC	European Committee for Electro Technical Standardization
CISPR	International Special Committee on Radio Interference
CMAD	Common Mode Absorbing Device
CQC	China Quality Certification Center
CSA	Classical (Conventional) Site Attenuation
CSA	Canadian Standards Association
DAF	Dual Antenna Factor
DC	Document for Comment
DoC	Declaration of Conformity
DOW	Date of Withdrawal
DII	Department of I rade and Industry
	Device Under Test
ECANB	EC Association of Notified Bodies
EUIIIA	European Information Communications and Consumer Electronics Technology Industry Association
EICTA	Electro Magnetic Compositive Conference
EMCAB	Electromagnetic Compatibility Advisory Bulletin
EMEAD	Electromagnetic Field
EMF	Electromotive Force
ETSI	European Telecommunication Standards Institute
EUANB	European Union Association of Notified Bodies
EUT	Equipment Under Test
FAR	Fully Anechoic Room
FDIS	Final Draft International Standard
GB	guo jia biao zhun (National Standard of China)
GSO	Gulf Cooperation Council Standardization Organization
ICES	Interference-Causing Equipment Standards
ICNIRP	International Commission on Non-Ionizing Radiation Protection
IS	International Standard
ISM	Industrial Scientific and Medical
ITE	Information Technology Equipment
LCL	Longitudinal Conversion Loss
MME	Multimedia Equipment
MOU	Memorandum of Understanding
MP(法)	Magnetic Probe

• LIST OF ABBREVIATIONS used in Committee Activities section

Abbreviation	Full Name
MRA	Mutual Recognition Agreement/Arrangement
NCB	National Certification Body
NICT	National Institute of Information and Communications Technology
NIST	National Institute of Standards and Technology
NP	New Work Item Proposal
NSA	Normalized Site Attenuation
OFDM	Orthogonal Frequency Division Multiplex
PAS	Publicly Available Specification
PLT	Power Line Telecommunication
R&TTE	Radio & Telecommunications Terminal Equipment
RBW	Resolution Band Width
REF	Reference
RRA	Radio Research Agency
RRT	Round Robin Test
RSM	Reference Site Method
RVC	Reverberation Chamber
SAC	Semi Anechoic Chamber
S/N	Signal to Noise ratio
TF	Task Force
TG	Tracking Generator
UPS	Uninterruptible Power Supply
VBW	Video Band Width
VHF-LISN	Very High Frequency-Line Impedance Stabilization Network
VSWR	Voltage Standing Wave Ratio
WP	Working Party



1. Foreword

There are horizontal committees in charge of the development of EMC standards. They are CISPR (International Special Committee on Radio Interference) and IEC/TC77 (International Electrotechnical Commission – Electromagnetic Compatibility). In this article I try to clarify the division of the responsibility between CISPR and TC/77, basic standards and common standards, emission standards and immunity standards from a view point of low frequency phenomena, high frequency phenomena and others characteristics.

2. Responsibility split between CISPR and TC77

In terms of electromagnetic phenomena they are classified into low frequency phenomena below 9kHz associated with power supply systems and high frequency phenomena above 9kHz associated with general equipment.

Table 1 indicates responsibility split between CISPR and TC77 and major standards developed by both of them. First of all EMC standards are classified into the following two groups.

One is emission standards and the other is immunity standards. Emission standards are designed to control disturbances emitted by equipment not to disturb other equipment with the emissions. Immunity standards, on the other hand, are to define performance degradation and malfunctions caused by electromagnetic disturbances from other equipment. In terms of the classification of standards it generally goes as follows. They are (1) basic standards mainly on testing methods, (2) common standards on limits commonly applicable to equipment used in residential, commercial and industrial environment and (3) product standards defining limits for products.

(1) Basic standards

In this category of standards, SC77A under TC77 covers the low frequency phenomena both on emission standards and immunity standards. In the area of high frequency phenomena, on the other hand, SC-A (a subcommittee of CISPR) is in charge while SC77B (high frequency phenomena) is in charge of immunity standards under TC77. Basic emission standards developed by SC77A, on the other hand, include IEC 61000-4-7 (Testing and measurement techniques - Harmonics and interharmonics), IEC 61000-4-15 (Testing and measurement techniques - Flickermeter - Functional and design specifications) among others. Basic immunity standards developed by SC77A also include IEC 61000-4-11 (Testing and measurement techniques- voltage dips) and IEC 61000-4-13 (Testing and measurement techniques - Harmonics).

Basic emission standards developed by CISPR SC-A, on the other hand, include CISPR 16-1 series on measurement apparatus, CISPR 16-2 series on measurement methods and CISPR 16-4 series on measurement

uncertainty. Lastly, basic immunity standards developed by SC77B include standards on immunity such as IEC 61000-4-2 (Statics discharge testing method) and 61000-4-3 (High frequency electro-magnetic field testing method).

(2) Common standards

As far as electromagnetic phenomena is concerned, entire frequency range is subjected with no distinction between low and high frequency ranges. Common emission standards under the responsibility of SC-H include IEC 61000-6-3 (residential, commercial and light industrial environment) and IEC 61000-6-4 (industrial environment). Standards developed by CISPR are given numbers CISPR** while common standards are numbered the same way as TC77 standards. As to major common immunity standards developed by the parent committee TC77, they include IEC 61000-6-1 (residential, commerce and light industrial environment) and IEC 61000-6-2 (industrial environment).

See Table 1 at the bottom of this article for the responsibility sharing between TC77 and CISPR and representative standards

Types of standards	Electromag-netic	Emission standards	Immunity standards
Standardo		SC77A	SC77A
Basic	Low frequency (Below 9kHz)	IEC 61000-4-7 (Power supply harmonics measurement method) IEC 61000-4-15 (Flicker meter)	IEC 61000-4-11 (Testing and measurement techniques - Voltage dips) IEC 61000-4-13 (Harmonics and interharmonics measurement techniques)
standards		CISPR/SC-A	SC77B
	High frequency (Above 9kHz)	CISPR 16-1-1 (Radio disturbance and immunity measuring apparatus) CISPR 16-2-1 (Conducted disturbance measurements)	IEC 61000-4-2 (Electrostatic discharge immunity test) IEC 61000-4-3 (radio-frequency, electromagnetic field immunity test)
		CISPR/SC-H	TC77
Common standards	Entire frequency range	IEC 61000-6-3 (Emission standard for residential, commercial and light-industrial environments) IEC 61000-6-4 (Emission standard for industrial environments)	IEC 61000-6-1 (Immunity standard for residential, commercial and light-industrial environments) IEC 61000-6-2 (Immunity standard for industrial environments)
		SC77A	_
Product group standards	Low frequency range (below 9kHz)	IEC 61000-3-2 (Limits for harmonic current emissions) IEC 61000-3-3 (Limitation of voltage changes, voltage fluctuations and flicker in	_

Table 1 Responsibility split between TC77 and CISPR and their representative standards

		public low-voltage supply systems)					
		CISPR/SC-B • D • F • I	CISPR/SC-F · I				
		SC-B: CISPR 11 (ISM equipment)	SC-F: CISPR 14-2 (Home appliances)				
		SC-D: CISPR 12 (Vehicles, boats and internal	SC-I: CISPR 20 (Broadcasting receivers)				
	High frequency	combustion engines)	SC-I: CISPR 24 (ITE)				
	range (above	SC-F: CISPR 14-1 (Requirements for	SC-I: CISPR 35 (Multimedia equipment)				
	9kHz)	household appliances)					
		SC-I: CISPR 13 (Sound and TV broadcast					
		receivers)					
		SC-I: CISPR 22 (ITE)					
		SC-I: CISPR 32 (Multimedia equipment)					
		Products committees (TC9、SC22G、SC62A、SC65A、TC69 等)					
	All frequency ranges	TC9: IEC 62236-3-1 (The whole railway cars)					
Product		SC22G: IEC 61800-3 (Adjustable speed electrical powerdrive systems)					
standards		SC62A: IEC 60601-1-2 (Medical electric equipment)					
		SC65A: IEC 61326-1 (Industrial process measurement					
		control)					
		TC69: IEC 61980-1 (Wireless charger for electric cars)					

(3) Product group standards

TC77 and CISPR are engaged in the development of product oriented standard on top of basic standards and common standards, whose examples are indicated in the table above. As to product group standards in view of the low frequency emission, SC77A is in charge. They include IEC 61000-3-2 (Power harmonics) and 3-3 (Voltage fluctuation – flicker) as their main standards. In terms of product group standards associated with high frequency emissions, subcommittees under CISPR are in charge. They are CISPR 11 (ISM equipment), CISPR 12 (automobiles), CISPR 13 (broadcast receivers), CISPR 14-1(home appliances), CISPR 22 (ITE), and CISPR 32 (multimedia equipment) among others. CISPR subcommittees are also responsible for the development of immunity standards related to high frequency phenomenon. They include CISPR 14-2 (home electric equipment), CISPR 20 (Broadcasting receivers), CISPR 24 (ITE), CISPR 35 (multimedia equipment) and others.

(4) Product standards

Product standards are developed by responsible product committees of IEC, examples of which are indicated in the Table 1 above. They are IEC 62236-3-1(Rolling stock – Train and complete vehicle) of TC9, IEC 61800-3 (Adjustable speed electrical power driven system) of SC22G, IEC 60601-1-2 (Electromagnetic disturbances – requirements and tests) of SC62A, IEC 61326-1(EMC requirements – Part 1 General requirements) of SC65A, IEC 61980-1(WPT) system of TC69 among others.

References: (omitted as they are papers written in Japanese)



Masamitsu Tokuda

- 1967 Graduated from Electronics Engineering Department of Hokkaido University
- Joined NTT, assigned to the Electrical Communications Laboratories 1969
- 1987 Leader of EMC study group
- 1996 Professor of Electric Engineering Department, Kyushu Institute of Technology
- 2001 Professor of Electronic communication department, Musashi Engineering University
- 2010 Professor emeritus of Tokyo City University, Visiting co-researcher of the department of new region creation science of the graduate school of Tokyo University

Major prize received

- Merit award IEICE (on the design theory and evaluation method for optical fiber cables)
 Information communication merit award by MPT (on EMC technology development)
- 2003 Industrial standard merit award by the minister of METI
- 2004 IEICE fellow
- 2007 Promoted to IEEE fellow



We participated in the subject symposium to present VCCI papers adopted and attend related presentations by others.

Venue: Yonsei University, Seoul, Korea								
Dates:	June 20 – 23, 2017							
VCCI Particij	pants:	Shinichi Okuyama	Technical Subcommittee (NEC Platforms, Ltd.)					
		Nozomi Miyake	Technical Subcommittee (NEC Corporation)					
		Akira Oda	Senior Managing Director (VCCI)					
		Hidenori Muramatsu	Director of Engineering (VCCI)					

1. Overview

Technical program was made of Keynote speeches, Tutorials, Workshops and Technical Sessions. The Technical session was programmed with 163 papers contributed by 17 countries including 2 papers from VCCI presented by Mr. Okuyama and Mr. Miyake of VCCI Technical Subcommittee.

2. Details

- Keynote Speeches
 - (1) Signal and Power Integrity Research in EMC

Covered with comprehensible presentations with examples of advancement in LSI technologies were how SI/PI will be influenced by IoT, electric vehicles, high speed communication technologies, operational rate at GHz/THz level and the advancement of EDA tools which are all under the technology trends.

(2) Biological Effects of Radio Frequency Electromagnetic Fields on the Brain

Discussed were on-going research on RF-EMF from multiple angles including changes in bodily heat and impact to hormone. Concluded was that it is difficult to prove their influence to human body today, but longtime continuous research is important.

- Tutorials
 - (1) The Role of the IEC Advisory Committee on EMC (ACEC) in Coordinating IEC EMC Activities There are eight advisory committees to support SMB (Standardization Management Board) in IEC. One of them is ACEC (Advisory Committee on Electromagnetic Compatibility). Among their subject which we are interested in were as follows.
 - 1) EMC requirements below 150kHz on products using PLC (power line communications) connected to

Smart Grid (under study in SC77A/WG8)

2) EMC requirements for WPT (Wireless Power Transfer) in the range of 9 – 150kHz (under study in SISPR SC-B)

Other subjects discussed in the session included

- IEC 61000 series on TC77 immunity issues
- IEC 61851 series on electric vehicles of TC69
- IEC 60601 series on medical equipment of TC62
- IEC 62209 series on EMF of TC106 Current maintenance status and challenges
- IEC 61000 series on immunity against near emission in testing (IEC 61000-4-
 - 39), which is one of the requirements considered important
- Also discussed was requirements for WPT on EMF
- Workshops
 - (1) Understanding the Importance of EMI Compliance Receiver Calibration Measurements

The following 5 points were explained as the method of calibration of EMI receivers standardized in CISPR 16-1-1 Amd.3. Items 3) and 4) should be pay attention to as they may impact the current calibration methods.

- 1) Use traceable reference standard/IEC 17025
- 2) Use equipment calibrated by the procedure specified by ISO/IEC 17025.
- 3) It is desirable to use the calibration method specified by the measuring equipment manufacture. If different procedure was applied its validity shall be confirmed and clarify its difference from the calibration method of the manufacture
- 4) Partial calibration is admissible but interaction caused by use of different parameters shall be understood
- 5) Measurement results shall be reported accompanied by uncertainty of measurement.
- (2) CISPR 16 Measurement Instrumentation Uncertainties from Site Contribution for Radiated Emissions Measurements above 1 GHz

Calibration of site by SVSWR above 1GHz is done by evaluating the measuring points (1 to 6) at front, right, left and the center. For this reason the results of the site calibration change by the size of the test volume, which leads to large uncertainty of measurement. As an answer to the question how to convert SVSWR result to MIU (Measurement Instrumentation Uncertainty) a method called A Sliding Window has been proposed. In this method the calculation is done to get the average value and standard deviations to it and convert it into Δ SA. This method is worthy of consideration as the method to calculate MIU.

(3) Recent Developments in CISPR 16 Series on Measurements below 30 MHz There was a report given as follows. There has been work done on radiated emission in 9 kHz – 30 MHz with regard to non-contact chargers and plasma TVs. This issue is worked on by CISPR 16-2-3 (Emission), CISPR 16-1-4 (Site validation), and CISPR 16-1-6 (Antenna Calibration). It was also reported that 10m SAC is known not to satisfy the site calibration by 10m SAC, which is still under validation. VCCI Technical Subcommittee should revisit the standards and measurement methods for radiated emission for the frequency range 9 - 30 MHz.

- (4) EMC Standard Measurement in Japanese Industry
 - Efforts to Improve the Accuracy of Measurement

The EMC study committee of the KEC Electronic Industry Development Center reported on their study concerning the results of a round robin test on radiated emissions and conducted emissions. They also reported on the EMC related standards in Japan by referring to VCCI and its new operational rules together with EMI rules in the Den-An law. Among questions raised there was no question asked about the new rules of VCCI.

- Technical Sessions
 - Use of FFT-based Measuring Receivers for EMI Compliance Measurements Against CISPR 32 FFT based EMI receives can be applicable to the of CISPR 32 compliance measurement in greatly shorter time
 - (2) Comparison of Test Standards for Immunity Testing in Reverberation Chambers

In using reverberation chambers for testing of radiated immunity, applied standards are IEC 61000-4-21, DO 160F, DO 160G and MIL-STD 461F among others.

The presentation covered the effects of the difference in applied standard (61000-4-1, DO 160F, DO 160G and MIL-STD 461F etc.) to the results of chamber calibrations

3. Presentation of VCCI papers

Mr. Okuyama and Mr. Miyake of VCCI Technical subcommittee made presentations in Technical Session – EMC Measurement (II) on

 Investigation Into the Influence of Ground Plane Insulation Thickness on Radiated Emission From Mains Cable of EUT (The work was done by Mr. Okuyama, Mr. Kuwabara, Mr.Miyata and Mr. Osabe of VHF-LISN WG of VCCI.)

The gist of the presentation was as follows. That is, in the measurement of radiated emissions the course of uneven measurement results among testing sites comes from the degree of coupling of mains cable with the metal reference planes. The paper discusses the degree of coupling and proposal on the improvement with uniformity in the coupling, which is to be proposed to CISPR 32.

Major Qs and As went as follows.

- Q1: Why radiated emission changes if the thickness of insulator is changed?
- A1: We assume that this is because the degree of capacity coupling between the power cable and he

floor changes the impedance of the cable. As the result radiated emission changes, we consider.

- Q2: Did you do the measurement both in horizontal and vertical polarizations?
- A2: We only did the measurement at vertical polarization the way power cable is run.
- (2) Comparison of Configuration for Conducted Emission Measurement Specified in CISPR 32 and CISPR

13 (The work was done by Mr. Miyake, Mr. Tsunoda, Mr. Hiratsuka and Mr. Muramatsu of the Conducted Emission Measurement WG of VCCI.)

The gist of the presentation went as follows. That is, in comparison of impact of testing configuration to conducted emission measurement based on CISPR 32 with that of CISPR 13, and in comparison of impact of changing the complexity level of the display in the screen to the measurement results.

Major Q and A went as follows.

Q1: Is CISPR 32 based testing mandatory in VCCI?

A1: There is the transient period given until March 31, 2019 during which either CISPR 22 or 32 are selectable. After April 1, 2019 only the results of CISPR 32 based testing will be accepted.

Testing with CISPR 32 is testing the system, not box, so it is easily imaginable that the emission will be changed compared to the measurement with CISPR 13. Audience comments included that it will be very beneficial both for testing side and standard developers' side to get the result analysed and reported.

4. Comments

Both presentations were on the new testing method of VCCI based on CISPR 32 which is a forerunner in the world. Later some inquiries came in VCCI on the subject asking technical questions such as technical hints on measurement with radio feature kept ON and on the tips in the use of the color bars among others. All those feedbacks indicated that VCCI is recognized as a forerunner in this corner of disturbance control technology. In terms of keynote speeches and tutorials they hinted that the rate of the development of new technologies and products are accelerated in the field of EMC.

In keynote speeches and tutorials there were hints on new technologies and products as well as enrichment of EMC testing standards. We felt that the keywords for tomorrow is IoT and MME which will bring about new challenges in the corner of EMC in the world.

The next APEMC will be held jointly with IEEE EMC Symposium in Singapore. It is our commitment to positively participate in such events as in the past with contributions and useful information exchanges with influential people.



At the entrance of the exhibition hall



Presentation by Mr. Okuyama



A view of the exhibition hall



Presentation by Mr. Miyake



The name of the exhibition:	COMPUTEX TAIPEI 2017				
URL:	http://www.computextaipei.com.tw/ja_JP/index.html				
Sponsors:	Taiwan External Trade Development Council (TAITRA)				
	Taipei Computer Association (TCA)				
Dates:	May 30 – June 3, 2017				
Venue (four locations):	Halls 1 and 3 of Taipei World Trade Center				
	Taipei Nangang Exhibition Hall				
	Taipei International Convention Center				
VCCI attendants:	Shinji Kuroda, Chair, Communication Subcommittee				
	(Hitachi Information & Telecommunication Engineering, Ltd.)				
	Yasushi Hirakawa, Communication Subcommittee (NEC Platforms, Ltd.)				
	Jiro Iizuka, Communication Subcommittee (Oki)				
	Akira Oda (VCCI)				
	Naoyuki Tsurumi (VCCI)				
	Miki Ichino (VCCI)				
	Naoko Hori (VCCI)				
Exhibit scale:	1,600 companies, 5,010 booths				
No. of Visitors:	140,000+				
No. of Registered buyers:	. of Registered buyers: 41,378 (of 167 countries)				

1. Purpose of VCCI participation in the trade show

COMPUTEX TAIPEI is the biggest IT trade show in Asia for the IT industry attracting a great deal of buyers from overseas. The show is so influential that it is even said that business for the year is determined by the exhibition here. In fact majority of advanced computer related products to be exported are exhibited here attracting a great deal of buyers and industry association people. In order to do outreach activities for VCCI we ran our booth in a corner of the SmarTEX area where IoT applications among others are exhibited in Hall 1.

2. Exhibition

- Ran VCCI booth in the SmarTEX area in the Hall 1 of TWTC
- May 30 June 3: Opened to buyers of Taiwan and overseas visitors (VCCI booth opened until June 2)

3. VCCI's exhibition

We had cooperation of local resident Mr. Son as the VCCI interpreter in our activities including distribution of hands-out and explanations on VCCI activities

We distributed what we prepared for this exhibition as follows. All were gone in the 4 days.

•	Novelty goods:	500
•	Flyers in English:	500
•	Flyers in Taiwanese:	500
•	Guide to join VCCI(in English):	50
•	Table of VCCI standards(in English):	50
•	Invitation to VCCI seminars (in English):	100

4. Results and the way foreword

4.1 A sketch of the exhibition

The exhibition of COMPUTEX TAIPEI run in Taipei for May 30 to June 3, 2017 is one of the largest ICT exhibitions in Asia. It was held in the four sites with given themes as follows.

(1) Taipei World Trade Center – Exhibition Hall

Security products, smart home and entertainment, smart wearable, IoV and vehicle mounted electronics, smart home & entertainment, smart wearables, IoV and vehicle mounted electronics, 3D printers and smart business solutions

- (2) Taipei World Trade Center Exhibition Hall 3 IoT and Big Data, e-Commerce, Virtual Reality & AR, AI, and Distractible innovations
- (3) Taipei International Convention Center Semiconductors
- (4) Taipei World Trade Center NANGANG Exhibition Hall

System solutions, Business solutions, Parts, Games & VR, iStyle, Data storages, International exhibitors and Chinese exhibition area, and others.

COMPUTEX TAIPEI of this year was run with the five main themes in the four featured exhibition areas. They were, AI and robotics, IoT applications, Innovation and start-ups, Business solutions and Gaming and VR.

In "IoT applications" in which VCCI ran its booth the following exhibitions drew visitors' attentions. They were a light projected keyboard and piano controlled by smartphones, and smart home controlling home appliances among others. Many applications were addressing smartphones which attracted many audiences.

4.2 Public Relations activities

• We made VCCI fliers in Taiwanese and English and distributed them together with VCCI Guide and the

VCCI annual reports together with novelties and the table of standards.

- We explained our activities interpreted in Taiwanese by the interpreter to have the activities of VCCI understood by Taiwanese vendors.
- We employed a local interpreter for the explanation on VCCI for Taiwanese IT vendors
- We asked "Do you know VCCI mark?" as a starter to passing-by exhibition visitors showing some interest in our booth.
- We explained to them what VCCI is for by referencing the VCCI mark electronically displayed in smartphones.
- To people who proactively visited the VCCI booth and who responded to our call we explained the purpose of the VCCI mark by handing them VCCI fliers.
- We asked the visitors for their business card if they showed some interest in the VCCI mark so that we can contact them later.
- Some visitors wanted to hear our explanations as they have plan to export their products to Japan. Also there were some visitors from VCCI member companies. We felt that the recognition rate on VCCI has been improved.

4.3 Trend in VCCI booth visitors

- This year many local vendors of Taiwan visited us saying they want to become members of VCCI (15 companies. It was approximately 20 companies last year.)
- Visitors were from the mainland China, Indonesia, Singapore, Malaysia and even from India and Iran, which means the exhibition got more global.
- There were not a small number of cases in which ODM/OEM manufactures visited us to ask how they can join VCCI. This seemingly is because Japanese buyers ask ODM/OEM suppliers if they are VCCI members.

4.4 The day's outcome

- We had many visitors to our booth due probably to the location of our booth in the main exhibition hall. All or our flyers and novelties were gone to the hands of visitors.
- Collected visitor's cards amounted to 100, which we analyzed upon returning home for future actions.
- One Taiwanese company wanted to join VCCI on the spot.

4.5 Others

- Many visitors asked us questions by mimicry "What is VCCI?" as printed in the flyer. So we think our flyer gave us a good excuse to start our explanation about VCCI.
- Not many booths gave out novelties like VCCI, so not a small number of visitors to our booth paid attention to our briefing on VCCI for our better public relations.

4.6 Remarks

We had renewed our recognition that COMPUTEX TAIPEI attracting 140,000+ visitors to the most advanced ICT products and technologies in the world is the best event for VCCI to do its outreach activities there. We think we had done sufficient PR activities there by our explanation to not only to Taiwanese visitors but also visitors from elsewhere in the world. It is our intention to continue this kind of activities on a global basis for VCCI to be known wider and deeper in the world.



A booth view



A booth view



A booth view



A bird's eye view of the venue



The 2016 VCCI business report meeting was held as follows.

Date/Time:	July 7, 2017	13:30 - 17:15
Venue:	B2F Large Hal	ll, Kikai Shinko, Kaikan
Attendants:	Approximately	70

Day's program

Subjects and Reporters					
Greeting					
Keiichi Kawakami, President of VCCI					
Business reporting					
Akira Oda, Director of VCCI					
Activities of Steering Committee					
Shinji Mine, Chair					
NEC Platforms, Ltd.					
Activities of each Subcommittees					
Technical Subcommittee Minoru Hirahara, Chair					
Fujitsu Advanced Technologies Inc.					
International Subcommittee Yukio Uchida, Chair					
Panasonic					
Market Sampling Test Subcommittee Shin Kanno, Chair					
NTT Advanced Technologies Inc.					
Break					
Communication Subcommittee Shinji Kuroda					
Hitachi Information Communication Engineering					
Education & training Subcommittee Minoru Hirata					
Hitachi					
Qs & As					
Break					
Guest speech: The most recent activities of AIST					
Measurement of basic characteristics of antennas based on the light					
applied electromagnetic field technologies					
Lecturer: Satoru Kurokawa, Head of the Electromagnetic Field Standards Research					
Group					

In the beginning Mr. Kawakami, President of VCCI made an opening speech as follows.

- The number of VCCI members at the end of the last fiscal year reached 1,134 companies. VCCI implemented the CISPR 32 based new rules for multimedia equipment as the forerunner in the world. The number of cases new rules applied to are on the steady increase. We are thankful for the support of related government offices and VCCI members for the honorable situation we are in.
- Recently the world of electronics business is facing with the era of big changes. In Japan the industry has also started efforts on Society 5.0 where "Super smart society" is being realized ahead of the world which enlarge the scene of electric wave utilization. VCCI will be asked by the industry to enlarge is coverage in such an advanced society.
- It is our commitment to maintain cleaner radio wave environment in Japan to win more of members' reliance on VCCI than ever.

Mr. Oda reported on the business results of FY2016 and plan for FY 2017 whose items are as follows. FY2016

- Overview of VCCI, organization, councilors and board of directors
- Transitions on the number of VCCI members, distributions of overseas members, councilors and board of directors, mutual acceptance of test data with overseas test houses and status on site registrations
- Summary on the results of main business areas for FY2016
 Rebuilding of attractive VCCI operations, response to the harmonized Den-an law, increasing the reliability of the VCCI mark, maintain and strengthen relations with pier organizations overseas, etc.
 FY2017
- VCCI councilors and executives in FY2017
- Briefing on FY2017 VCCI operational strategy

Execute attractive VCCI operations, response to CISPR 32 Multimedia equipment international standards, enhance information exchange with overseas related organizations, improve the reliability of the VCCI mark, and others

Next Mr. Minegishi, Chair of the Steering Committee, reported on overall VCCI operations

- Structure of VCCI committees for FY2016, roles and projects of each committee and members of the Steering committee
- Reported on the following matters as highlight of VCCI operations
 - The revision of the VCCI rules (via systematic process)
 - Information exchange meetings of related overseas organizations
 - Ran VCCI EMC seminars as a regular program at the MIC Information Communication Month, ran EMC seminars at prefectural level industry technology centers (Mie, Minami Shinshu Iida and Nagasaki prefecture)
 - Renewed the contract with overseas testing houses on mutual acceptance of data of testing laboratories

- Highlight on VCCI activity plan for FY2017
 - Study on attractive activity plans by a Task Force, outreach activities on the new rules based on CISPR
 32, run EMC seminars, promote standardization on VHF-LISN, enrich the support on CISPR 32 based
 VCCI rules (development of guidance etc.)

Next, reports were given by subcommittee chairs as follows

Technical Subcommittee by the chair Mr. Hirahara

- Basic policy, activities, operational plan for FY2016 of Technical Subcommittee
- Outcomes of each working group under the VCCI Technical subcommittee. Report on VCCI contribution on MIC draft for CISPR 16-1-1 and 16-1-4.
- Organization and activity plan of the Technical Subcommittee for FY2017
- Activity plan of each working group for FY2017

International Relations Subcommittee by the chair Mr. Uchida

- Roles and activity plan of the subcommittee
- Database on EMC standards in major countries of 2016 Built a database by extended researches on adopted EMC standards in 25 major overseas countries for FY2016
- Database on adopted EMC standards on ITE Created for 11 entries for 5 countries and regions
- Trips to Middle East Gulf states on the study of technical rules on regulated voltages equipment
- International Forum 2016

Invited guest speakers for the Forum from Europe, Australia and EAEU (Russia) for their presentations under the theme "Recent direction on EMC regulations in major countries and regions"

• Activity plan for FY2017 and membership of the committee

Market Sampling Test Subcommittee by the chair Mr. Kanno

- Briefed on the autonomous control of VCCI and Market Sampling Test
- Activities in 2016
 - Market Sampling Test: Failed 5 and passed 95 of 100 units sampled
 - Document inspections: The owners of 4 of 40 cases were asked for retesting
 - VCCI mark indication survey: On 1,700 units. Issued warning messages to the owners of products with improper VCCI mark indication
- Reported on the summary of Market Sampling Test
 - By class, purchased, loaned, by source country. Trend in the results of Market Sampling Test
 - Analysis of causes of fail and its trend
- Document inspection in FY2016

- The owners of 4 of 40 cases inspected were asked for retesting. 40 cases were judged passed after corrections by the owner of wrong or missed descriptions.
- The number of sampling by source countries: Japan-17, The US-14, UK-2, Korea-2 and others 5
- Briefing on the Fact-finding study on the mark indication
- Examples of deformation of the VCCI mark, marking on the cartons, etc. followed by correct way of marking explained by the presenter
- Explanation on the plan of physical year 2017 and on the committee members

Communication Committee by the chair Mr. Kuroda

- Briefed on FY2016 activities
- Release of periodicals 121-124 issues of VCCI Dayori and annual reports in Japanese and English for FY 2015
- Public Relations activities Illuminated ad board on VCCI in JR Osaka and JR Akihabara stations. Ad-stickers on train doors of subway Hibiya line. Ad movie on TV screen of the TV sales floor of a mass merchandiser.
- Activities for improving the recognition rate of the VCCI mark and PR for general public Update of the VCCI standard table with the new VCCI rules, ran VCCI ad in technical periodical "Shin Denki" and distribution of 2017 VCCI calendars to VCCI members of Japan
- Summary of responses to the questionnaires on the recognition rate of VCCI
- Participation in COMPUTEX TAIPEI 2016, Techno- frontier 2016 and CEATEC 2016
- Activity plan for 2017 and introduction of members of the Communication subcommittee

Education and Training Committee by the chair Mr. Hirata

- Briefing of the summary of activities in FY2016
- Status on courses run on the basic course for measurement engineers, training course for measurement engineers, antenna –NSA measurement course, 1GHz+ radiated disturbance measurement course and the operation course.
- Obtained the results of questionnaires for FY2016 course trainees. 97% of the responses says "Almost satisfactory."
- Started the plan on the new course "New operational rules and technical requirements for CISPR 32"
- Briefed on FY2017 focused activity plan

Develop new education programs on CISPR 32 based measurement for EMC managers and measurement engineers for their complete understanding of the new standard and deepening their measurement skills. Key materials will be VCCI 32-1 and VCCI-CISPR 32.

Lastly, Mr. Satoru Kurokawa of AIST gave his lecture on "The measurement of basic antenna characteristics using the light applied electromagnetic field measurement technology" as a project of AIST.



A scene of VCCI business report meeting (1)



A scene of VCCI business report meeting (2)



Social gathering after the report meeting (1)



Greeting by Mr. Kawakami



Dr. Satoru Kurokawa on his special lecture



Social gathering after -the report meeting (2)



1. Date of visit: April 21, 2017

2. Purpose

While the transient period to formal application of the R&TTE Directives (Radio & Telecommunications Terminal Equipment Directive (1999/5/EC) and the Radio Equipment Directives (2014/53/EU) which are to be closed on June 12 this year are still in the air due to the delay of the release of the harmonized standards under the RE Directives (covering 100 standards as of April 12, 2017). Under the circumstances manufacturers are perplexed as to how to face the situation in terms of following RE Directives in the release of their products meeting the standards on and after June 13.

Under the circumstances voices from European industry associations and manufactures in the world including those of ETSI are getting larger to postpone the transient period. However, there is no evidence or hint that the European Committee is considering the delay of the implementation, which put manufactures in the air. Under the circumstances we visited the European Commission responsible for regulatory policies with regard to RE Directives to investigate the up-to-date situation. This report is not to be held responsible for the contents. If needed please directly contact the responsible authorities.

3. Offices visited

European Commission Internal Market, Industry, Entrepreneurship and SMEs

4. Attendees

European Commission

Mr. Gwenole COZIGOU, Director, Industrial Transformation and Advanced Value Chains Mr. Birgit WEIDEL, Duputy Head of UNIT, Advanced Engineering and Manufacturing System Mr. Pier Francesco SMMARTINO, Desk Officer Radio Equipment Directive Advanced Engineering and Manufacturing System

VCCI

Yukio Uchida, Chair, International Relations Subcommittee (Panasonic) Kazuyuki Hori, Vice Chair, International Relations Subcommittee (Sony) Yoko Inagaki (VCCI)

5. Study results

(1) Transient period to the RE Directives from R&TTE Directives

There will be no postponement of the transient period of the RE Directives. However, the definite date will be announced by EC by the end of May when pragmatic solutions to partially satisfy racking standards under the RE Directives will be ready to go.

(Note) The update after the interview: Official gazette was released covering 140 standards in total (of which the number of new standards are 29). Of the 29 standards 23 standards are harmonized standards under the R&TTE Directives, released conditionally/

(2) Announcement of harmonized standards under the RE Directives

Standards to be released in May were eight in number.

Note : Update after the visit

Official gazette released on May 12 covered 11 new standards to make the total number of standards 111.

Official gazette released on June 8 covered 29 new standards to make the total number of standards 140.

Official gazette released on July 14 covered 2 new standards to make the total number of standards 142.

- (3) Progress status on major harmonized standards
 - 1) EN 301893 Under study with ETSI. Wait till the publication at the end of May.
 - Note: Update after the trip Conditionally released were V1.8.1 and V2.1.1 in the official gazette of June 8.
 - 2) EN 300440 Still under the review by EC Desk officers.
 - Note: Update after the trip Conditionally released in the official gazette were EN 300440-2 V1.4.1 on June 8 and EN300400 V2.1.1 on July 14.

EN 303345 - Not yet in the hand of EC desk officer

Note: Updated information after the visit: Voted down in ETSI on May 15. Proposed was to separate Part 1 through Part 1 for deliberation again.

(4) Plan on the release of a guideline on RE Directives

The final draft is expected to be approved in the Assessment and Market Surveillance Committee of June 1 and 2.

Note: Updated information after the return form the trip: Officially released on May 19.

- (5) Release of the implementation rules for announced regulations
 - Article 3.3 New requirements, Requirements for characteristic common AC/USB adapter (under review, official date of release - open)
 - 2) Article 4 Provision of information regarding compatibility of wireless device and software (details not confirmed)

- 3) Article 5 Model No. Registration: Registration for product with low level compatibility to requirements (details not confirmed)
- 4) Article 10 (10) Labelling requirements for package and attached documents regarding restriction on use, etc.

Final approval is expected to be obtained in the next TCAM (June 1 and 2). In the final draft (upon WTO-TBT comments gathered on the draft) there will be no change in the design of the pictogram.
Abridged sign "EU" is not accepted. Grace period will be 12 months from the date of the implementation which is two times longer than that of WTO-TBT.
(Note) Update after the trip: Released was official gazette of July 21 carrying COMMISSION IMPLEMENTING REGULATION (EU) 2017/1354 of July 20, 2017. The date of effectuation is August 9, 2017 with grace period by August 8, 2018.

(6) Harmonized standards in the area of Safety/EMC (including safety EMF/SAR Article 3.1 (a), EMC/Art. (b) Priority is lowered as the involvement of NB is not mandatory if it is not a harmonized standard. Discussions continue between CENELEC and EU and are near the agreement.





1. Period

May 31 - June 3, 2017

2. Visited place - Testing laboratories in outskirts of Taipei as follows

- Bureau Veritas Consumer Products Services (<u>http://www.bureauveritas-adt.com</u>)
 No.19, Hwa Ya 2nd Rd, Wen Hwa Vil., Kwei Shan Dist., Taoyuan City 33383
- (2) SGS Compliance Certification Services Inc. (<u>http://www.sgs.com</u>)
 No. 139. Wugong Road New Taipei Industrial Park Wugu District, New Taipei City 24891
- (3) Central Research Technology Co. (<u>www.crc-lab.com</u>)
 11, Lane41, Fushuen St., Uungshan Chiu, Taipei, Taiwan, 104

3. VCCI visitors

Shin Kanno, Chair, Market Sampling Test Subcommittee (NTT Advanced Technology Inc.) Hiroaki Suzuki, Vice Chair, Market Sampling Test Subcommittee (CASIO) Masateru Tagami, Administrator, Market Sampling Test subcommittee (VCCI)

4. Purpose

The Market Sampling Test subcommittee of VCCI runs approximately 100 cases of sampling tests a year and 50 cases of document inspections. Due to the increased complexity of recent products and their features, it is a challenge for us to secure the repeatability of conformity verification tests and Market Sampling Tests more than ever. So it is necessary for us VCCI to learn how to secure the repeatability of testing by deep understanding of the contents of the technical requirements based on CISPR 32. With this purpose in mind we decided, while we are in Taiwan, to visit a testing laboratory of Taiwan which serve the majority of conformity verification testing for VCCI registration and learn something to serve the improvement of our operations in Japan while we are here to run a VCCI Taipei workshop. With this background in mind we visited three representative testing houses in the suburb of Taipei while we are in Taipei to run a VCCI Taipei workshop.

5. General summary of our visit

In the trip to each testing laboratories after we checked their testing facilities for the status of their appropriateness we engaged in a discussion on the operations of VCCI run over Market Sampling Test schemes

and the contents of the revised VCCI rules based on CISPR 32. Also we talked about document inspection operations among others. More specifically, titles of VCCI presentations we made were "Activities of Market Sampling Test and the contents of revised VCCI rules," "The gist of CISPR 32 based testing" and "Examples of failure in Market Sampling Testing and document inspections."

10m SACs we toured to were all satisfactorily maintained and managed in each testing laboratory under deep technical considerations. They are even capable to do horizontal and vertical measurement simultaneously and even site attenuation too. Five points for the measurement of site attenuation were checked on an annual basis. In their shielded rooms they fixed ISN on the vertical face of the walls for better repeatability of the measurement.

In each testing lab the regular morning checking includes the measurement of given values at specified frequency with a comb generator. Also there was a good management practice going on for measuring apparatus and cables.

6. Qs and As

First we talked about the difference in conformity verification testing between the old scheme and the new based on VCCI-CISPR 32 and education of measurement engineers. As to conformity verification testing in each labs they set the worst radiated mode in pre-measurement preparation. Sine there is a possibility that measurement in the stand-by mode can get the worst results, special care is needed. In terms of the education of measurement engineers, the conditions for qualification of measurement engineers and examiners are predetermined by TAF (Taiwan Accreditation Foundation). So in each testing house, in-house specialists play the role of a lecturer by way of self-study. Under the circumstances there were voices that say if VCCI runs education courses in Taiwan they want attend the course even if the fee is required. What follows is Qs & As on the testing method based on VCCI-CISPR 32.

- Q1: You explained that measurement of equipment with wireless communication feature and test report shall include a description about the use of a filter to block the emission out of intended band. Is the use of this filter mandatory?
- A1: Not necessarily required. It is allowed to measure without the filter in low power wireless communications. In this case the data chart will show the existence of the spectrum of wireless communication.
- Q2: Is it allowed to register MME to VCCI which was tested in CISPR 13 in the past?
- A2: From now on a CISPR 13 complied MME is registerable to VCCI. Even if it is subject of PSE, electromagnetic noises testing is compatible with VCCI standard, so registration and indication on the product is allowed.
- Q3: This is about the requirement for color bar. If a mouse and keyboard are EUT is it necessary to display a color bar in the display of the host PC?

- A3: Color bar display is not necessary if EUT is a mouse or keyboard. However, the display of a color bar is required if the EUT is a PC designed to display the color bar.
- Q4: If the subject product is for the worldwide market and compliant with VCCI-CISPR 32. Is it necessary to go through conformity testing with 100V?
- A4: If the product is designed for world-wide use, the conformity testing at 110V and 230V will make it passable. If the product is only for Japanese market then testing only at 100V is allowed.
- Q5: This is about Q4. Will testing only at 110V be acceptable if preliminary radiation testing with 110V and 240V was successful?
- A5: Formal testing can go only with the voltage resulted in the worst result (the response was given later after the confirmation)
- Q6: This is about Q5 and A5. Why don't you take it in the FAQ corner?
- A6: We will notify this matter in a guideline and others.

7. Remarks

We were able to visit the three representative testing labs in Taiwan and to confirm the status of management of measurement chambers and the way to manage confirmed results. Both laboratories we visited were well managed leaving no problems for us to point out. Question and discussions about the VCCI rules were lively and they warmly accepted our suggestions and requests to make our visit very successful and meaningful.

Staffs of each laboratory have a good knowledge about the contents of CISPR 32 and they are satisfactorily engaged in CISPR 32 based testing for Europe and other regions as well. If anything, however, on things related to testing conditions there were some matters we need to communicate more with them as well as their requirements for opportunities for more of their education and training by us.

We felt that we should more widely and deeply communicate on the interpretation of VCCI-CISPR 32 to related organizations and people in order to lighten the load of the VCCI members in their work on retesting and conformity confirmation in Market Sampling Tests.

We understood in this trip that people are not necessarily satisfied with their own knowledge about details or exceptional cases in testing operations including testing conditions, data to be attached to the test report etc. etc. In order to improve the situation we should continue our visit to related testing laboratories, especially to those with high needs for the betterment of total VCCI operations.

We appreciate the labs we visited this time very much for their kind and well prepared briefing and guidance while they are busy with their preparatory work for EU RE Directives to be effectuated any time soon.



Taoyuan City BVCPS



New Taipei City SGS-CCS



Taipei CRT



By taking advantage of our visit to COMPUTEX TAIPEI we held a VCCI workshop with the purpose of explaining the new VCCI rules (VCCI 32-1:2016) in Taiwan where many VCCI members run their businesses.

1. Date/Time

June 2, 2017, 13:30 – 17:00

2. Venue

Conference room 4, Taipei World Trade Center

3. No. of participants

41

4. Purpose of the workshop

To deepen the understanding of VCCI members in Taiwan of VCCI 32-1:2016, the VCCI rules based on CISPR 32 Ed.2, enacted in the last year. Also to promote our relationship with Taiwanese members.

5. Presentations by VCCI

Moderator: Naoyuki Tsurumi (VCCI Director of administration)

(1) VCCI operations based on the new CISPR 32 Ed.2 – presented by Mr. Akira Oda (Executive director of VCCI)

- (2) Enactment and operation of the new VCCI Rules Shinji Mine, Chair of VCCI Steering Committee (NEC Platforms, Ltd.)
- (3) The contents of a new technical standard and guidance for operation Minoru Hirahara, Chair, VCCI Technical Subcommittee (Fujitsu Advanced Technology Co.)
- (4) Outline of Market Sampling Test and Revision of its RulesShin Kanno, Chair, Market Sampling Test Subcommittee (NTT Advanced Technology Inc.)

Qs & As

- Q1: Are the equipment the new rule applies to subject both to Old CISPR 22 and New CISPR 13?
- A1: Yes, subjected to are multimedia equipment which have both functions.

- Q2: The explanation about the Market Sampling Test covered "the standard applied with preferential treatment." What is it?
- A2: Details are under study. An example is as follows (contents omitted)
- Q3: Does VCCI run its own testing laboratories?
- A3: No. We don't. We use the four VCCI designated testing laboratories. It is described in VCCI Annual Report.

6. Summary of the seminar

Mr. Oda thanked the seminar attendees who came in the hard rain fall.

The majority of the attendees were VCCI members with basic knowledge about the VCCI rules, so many questions were asked from them to make the seminar vivid and useful. What follows is noteworthy Qs & A.

- Q1: Are the equipment subjected to the new rules are both old CIPR 22 based machines and new CISPR 13 based machines?
- A1: Yes. Subjected machines are multimedia equipment including both of them.
- Q2: What do you mean by the criteria of "The preferential treatment?"
- A2: Details are still under preparation.
- Q3: Does VCCI have its own testing labs?
- A3: No, we do not have our own labs. What we do is, we have a contract with four testing houses VCCI designated for testing of products for VCCI operations.

Note: We showed the workshop participants a VCCI annual report which carries an article introducing the VCCI contracted testing houses









7. Comments

Providing good services to VCCI Overseas members is one of the important activities of VCCI for sustaining the VCCI operations based on the self-regulation principle. We have had opportunities in Japan to explain the new VCCI rules effectuated in November last year but not once in overseas before. We think it was very worthy that we had the explanatory meeting for the first time in Taipei where one quarter of the VCCI members reside. We would like to expand this activities to other countries and regions in the years to come.

Lastly, our appreciation goes to the people of the Taipei computer association serving as the administrative office of the COMPUTEX TAIPEI.



This is a report on the VCCI seminar as a program of the 2017 Info-Communications Promotion Month administered by MIC.

- 1. Date/Time: May 19, 2017 13:00 17:00hr
- 2. Venue: VCCI meeting room, 5th floor NOA building
- 3. Number of attendees: Approximately: 40
- 4. VCCI speakers:

Akira Oda VCCI Director

Shinji Mine Chair, Steering Committee (NEC Platforms, Ltd.)

Minoru Hirahara Chair, Technical Subcommittee

(Fujitsu Advanced Technologies, Limited)

Minoru Hirata Chair, Education Subcommittee (Hitachi)

Hiroyuki Shimanoe Chief, Registration WG, Measurement Facilities Registration Committee (S-Tech)

5. Program

Time	Content	Speakers
13:30-14:00	 (1) Introduction of VCCI activities and direction in EMC regulation Membership system and self-control, activities of VCCI Future direction in EMI regulations (Den-an act and multimedia standard) Philosophy behind the rules revisions this time Revised rules on the Market Sampling Test and efforts in the field 	Akira Oda, Senior Managing Director, VCCI
14:00-14:30	 (2) Establishment and operation of the new rules The gist of the new rules Consideration on the transition period Introduction of Qs & As on the transition period 	Shinji Mine, Chair, Steering committee
14:30-15:15	 (3) Overview of the new VCCI Technical Requirements Introduction Gist of contents Division of VCCI-CISPR 32 from International Standard CISPR 32 Ed.2 Points in efforts to meet the standard 	Minoru Hirahara, Chair, VCCI Technical Subcommittee
15:15-15:30	Break	
15:30-16:10	 (4) EMI education/training and tips on EMI measurement Overview of VCCI training program Conformity verification reporting Guideline on test report creation 	Minoru Hirata, Chair, VCCI Education Subcommittee

16 : 10 - 16 : 30	(5) Rule on measurement facility registrationMajor changes in the practice of facility registration due to CISPR 32 based operations	Hiroyuki Enoshima, Measurement facility examination and registration WG
16:30-17:00	Q & A	All lecturers

6. Overview of the seminar

VCCI has long made it a practice to participate in the MIC's annual Information Communication Month programs as a regular organizer of VCCI Seminar opened to general public. This time we packed a rich program on CISPR 32 based VCCI operations. Covered topics included the missions of VCCI, the gist of CISPR 32 based VCCI operations which has been started just recently in addition to regular topics including technical trend, education programs and practice of measurement facility registration among others.

There were many questions asked by audience on CISPR 32 base operations and related concerns, which indicated people are very much interested in the new rule of VCCI.





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As of July 31, 2017

Planned number of	Loan-based		45		100					
Market Sampling Tests	Purchase-based		55							
		Cancelled						Judg	ment	
Sampling test Grand total	Selected	(unrealized shipment	Owner's consent	Testable	Test	Judgment	D 1	Failed - tentative		
		etc.)	pending	Sumples	compieteu	uwuiteu	Passeu	Finally passed	Finally failed	Pending
Grand total	44	3	7	34	22	11	9	0	0	0
Previous month grand total	0	0	0	0	0	0	0	0	0	0
		1	1		ſ	1		r	r	
Loan-based testing total	24	3	7	14	4	2	1	0	0	0
1 st Quarter	12	2	2	8	4	2	1	0	0	0
2 nd Quarter	12	1	5	6	0	0	0	0	0	0
3 rd Quarter	0	0	0	0	0	0	0	0	0	0
4 th Quarter	0	0	0	0	0	0	0	0	0	0
									r	
Purchase-based testing total	20	0	0	20	18	9	8	0	0	0
1 st Quarter	20	0	0	20	18	9	8	0	0	0
2 nd Quarter	0	0	0	0	0	0	0	0	0	0

Final	Result
1 mai	Result

Passed	Failed	Pending
1 asseu	Tancu	I chung
9	0	0

Document inspection	Selected	Cancelled (withdrawal, etc.)	Owner's consent pending	Inspectable samples	Pre-check completed	Judgment awaited	Judgment completed	Judg Cleared	ment Problems identified
	17	0	0	17	17	5	5	5	0

3rd Quarter

4th Quarter

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Failed Market Sampling Test - FY2017

As of July, 2017

Company name	FUJIFILM Cooperation
Model/Type	Digital Photo-Album PB-20J
Measurement	Radiated EMI measurement
results	Hor.: 6.2dB excess at 742.5MHz, Ver.: 2.9dB excess at 445.5MHz
Cause, measures	Cause:
(to be) taken and	Shield effect of HDMI cable bundled with shipped product (mass-production) varies widely.
actions for the	EMI test of plural combination was not enough for the mass produced product.
prevention of the	
recurrence	Measures to take on stocked products and shipped products:
	Stopped shipment of old PB-20J.
	The old HDMI cable were changed to newly developed good ones
	For products shipped, their registered customers are notified and the HDMI cables are
	changed to good one.
	Measures to take against recurrence of the problem:
	Clarify the manufacturing specification document of the HDMI cable to ensure its shielding
	performance.
	Confirm its EMI compliance with plural combination for mass produced product.

Report from the Secretariat

• List of Members (May 2017 ~ July 2017)

New Members

Membership	Member No.	Company Name	Country
Regular	3800	DAIKIN INDUSTRIES, LTD	JAPAN
Regular	3802	G-Printec Inc.	JAPAN
Regular	3804	Toshiba Memory Corporation	JAPAN
Regular	3810	CASO Inc.	JAPAN
Regular	3821	OCT Co., Ltd.	JAPAN
Supporting	3807	DENSO EMC ENGINEERING SERVICE CORP.	JAPAN
Regular	3792	Suzhou Lehui Display Co., Ltd.	CHINA
Regular	3794	Inspur Electronic Information Industry Co., Ltd.	CHINA
Regular	3806	Tiun Yuan Technology Co., Ltd.	CHINESE TAIPEI
Regular	3808	Sonos, Inc.	USA
Regular	3809	Cyviz AS	NORWAY
Regular	3813	Logic Supply, Inc.	USA
Regular	3815	Synology Inc.	CHINESE TAIPEI
Regular	3816	Clavister AB	SWEDEN
Regular	3818	Pure Storage Inc.	USA
Regular	3822	Advoli Limited	HONG KONG
Supporting	3811	Suzhou Science Standard Testing Co., LTD.	CHINA
Supporting	3812	China Academy of Information and Communications Technology	CHINA

Withdrawal Members

Membership	Member No.	Company Name	Country
Regular	186	Nisca Corporation	JAPAN
Regular	1978	Datacard Japan Ltd.	JAPAN
Regular	2564	Ditect. Corporation	JAPAN
Regular	3485	ORIENT ENTERPRISE CO., LTD.	JAPAN
Regular	1130	Blue Coat Systems, Inc.	USA
Regular	3377	WinSpeed Co., Ltd	CHINESE TAIPEI
Supporting	2649	EMC Integrity, Inc.	USA

Membership	Member No.	Company Name	Country	Former Company Name
Regular	37	Toshiba Infrastructure Systems & Solutions Corporation	JAPAN	TOSHIBA CORPORATION
Regular	244	TOSHIBA DIGITAL SOLUTIONS CORPORATION	JAPAN	Toshiba Solutions Corporation
Regular	1386	CANON FINETECH NISCA INC.	JAPAN	CANON FINETECH INC.
Regular	1614	IWATSU MANUFACTURING CO., LTD.	JAPAN	Fukushima Iwatsu Co., Ltd.
Regular	3605	Plusone Global Ltd.	JAPAN	PLUSONE MARKETING LTD.
Regular	131	Datalogic Srl	ITALY	IDEC AUTO-SOLUTIONS
Regular	1416	Seagate Cloud Systems, Inc.	USA	Seagate Systems (UK) Ltd
Regular	3036	Moda Inc.	KOREA	Modacom Co., Ltd.
Regular	3453	Bad Elf, LLC	USA	Bad Elf
Supporting	2257	Shenzhen FuGui Precision Industry Co., Ltd.	CHINA	Hong Fu Jin Precision Ind. (Shenzhen) Co., Ltd.
Supporting	2981	CSA Group Testing & Certification Inc.	CANADA	CSA International
Supporting	3561	EKTOS Testing & Reliability Services A/S	DENMARK	SP Technical Research Institute of Sweden
Request :	In case of any c Use the "Notice	hange in your company name, please kindly e of Change" at VCCI Website.	advise VCCI.	

Change of Company Name

• State of Conformance Report Submitted (V-2+VCCI 32-1)

(April 2017 ~ June 2017)

					April 2017		May 2017			June 20		7	
			Class A	Class B	Class A	Class B	Total	Class A	Class B	Total	Class A	Class B	Total
	Server	Super Computer, Server, etc.	A 2	a 2	27	2	29	15	8	23	31	8	39
uter	Tabletop type	WS, Desk-top PCs, etc.	В 2	b 2	1	13	14	0	28	28	2	26	28
Comp	Portable type	Note PCs, Tablet PCs, etc.	C 2	c 2	0	45	45	0	31	31	0	41	41
	Others	Office Computer, Wearable computers, etc.	E 2	e 2	2	3	5	2	3	5	4	1	5
	Storage Device	HDD, SSD, USB Memory, Media drives, etc. Disk drives, NAS, DAS, SAN, etc.	G 2	g 2	8	10	18	11	22	33	14	32	46
_	Printer	Printer (Compound equipment included), etc.	Н2	h 2	4	12	16	11	6	17	7	6	13
quipment	Display	CRT displays, Monitor, projector, etc.	J 2	j 2	8	51	59	13	56	69	10	31	41
pherals/Terminals E	Input/Output Device (excluding Auxiliary Memory, Printer, Display)	Image scanners, OCR, etc.	M 2	m 2	5	6	11	4	7	11	3	15	18
Peri	General Purpose Terminal	Display control terminals, etc.	N 2	n 2	0	0	0	1	0	1	1	0	1
	Exclusive Terminal	POS, Terminal for Financial and Insurance use, etc.	Q 2	q 2	3	3	6	9	0	9	9	3	12
	Other Peripherals Equipment	Others (PCI cards, Graphics cards, Mouse, Keyboard, etc.)	R 2	r 2	11	31	42	13	31	44	14	46	60
nt	Broadcast receivers	Television, Radio, Tuner, Video recorder, Set-top Boxes, etc.	K 2	k 2	0	0	0	0	1	1	0	0	0
equipmer	Audio equipment	Speaker, Amplifier, IC recorder, MP3 player, Headsets, etc.	L 2	12	0	2	2	0	2	2	0	4	4
udio visual	Video/Camera equipment	Digital video cameras, Web cameras, Network cameras, Video players, Photo frames, Digital-camera, etc.	I 2	i 2	1	11	12	5	7	12	11	8	19
V	Others	Other Audio visual equipment	P 2	p 2	2	0	2	0	1	1	3	4	7
Copying Machine/ Compound equipment	-	Copying Machine/Compound equipment, etc.	S 2	s 2	3	0	3	3	0	3	1	0	1
t	Terminal	Mobilephone, Smartphone, PHS telephones	T 2	t 2	0	1	1	0	1	1	0	5	5
Equipmen	equipment	Telephone Equipment (PBX, FAX, Key Telephone System, etc.), Cordless telephones	U 2	u 2	0	1	1	2	0	2	1	0	1
nications	Network related	Network Channel Terminating Equipment (Modem, Digital Transmission Equipment, DSU, TA, etc.)	V 2	v 2	3	0	3	0	0	0	5	1	6
Commu	equipment	LAN Equipment (Rooter, HUB, etc.), Switching-node, etc.	W 2	w 2	67	17	84	60	11	71	58	9	67
	Others	Other Communications Equipment	X 2	x 2	9	6	15	6	3	9	15	6	21
l ent	Electronic stationeries	Electronic dictionaries, Electronic book readers, etc.	D 2	d 2	0	1	1	0	1	1	0	0	0
nent anc equipme	Electronic toys	Game machines, Game pads, Toy drones, etc.	Y 2	y 2	0	1	1	0	3	3	0	2	2
Entertainr ucational	Lighting control equipment for entertainment	Lighting control equipment for entertainment	Z 2	z 2	0	0	0	0	0	0	0	0	0
edu	Others	Others (Navigator, etc.)	F 2	f 2	0	0	0	0	0	0	0	0	0
Others			O 2	o 2	8	5	13	9	3	12	43	0	43
Total					162	221	383	164	225	389	232	248	480

• State of Conformance Report Submitted (VCCI 32-2)

(April 2017 ~ June 2017)

					April 2017		May 2017			June 20		7	
			Class A	Class B	Class A	Class B	Total	Class A	Class B	Total	Class A	Class B	Total
	Server	Super Computer, Server, etc.	A 2	a 2	12	2	14	8	8	16	14	8	22
uter	Tabletop type	WS, Desk-top PCs, etc.	В 2	b 2	0	5	5	0	6	6	1	17	18
Comp	Portable type	Note PCs, Tablet PCs, etc.	C 2	c 2	0	16	16	0	15	15	0	17	17
	Others	Office Computer, Wearable computers, etc.	E 2	e 2	0	1	1	1	3	4	2	1	3
	Storage Device	HDD, SSD, USB Memory, Media drives, etc. Disk drives, NAS, DAS, SAN, etc.	G 2	g 2	3	1	4	4	8	12	3	10	13
	Printer	Printer (Compound equipment included), etc.	Н2	h 2	1	1	2	2	1	3	3	6	9
quipment	Display	CRT displays, Monitor, projector, etc.	J 2	j 2	0	2	2	1	6	7	6	2	8
oherals/Terminals E	Input/Output Device (excluding Auxiliary Memory, Printer, Display)	Image scanners, OCR, etc.	M 2	m 2	3	4	7	2	5	7	2	8	10
Perij	General Purpose Terminal	Display control terminals, etc.	N 2	n 2	0	0	0	1	0	1	0	0	0
	Exclusive Terminal	POS, Terminal for Financial and Insurance use, etc.	Q 2	q 2	1	1	2	1	0	1	6	0	6
	Other Peripherals Equipment	Others (PCI cards, Graphics cards, Mouse, Keyboard, etc.)	R 2	r 2	4	15	19	0	9	9	3	19	22
ıt	Broadcast receivers	Television, Radio, Tuner, Video recorder, Set-top Boxes, etc.	K 2	k 2	0	0	0	0	1	1	0	0	0
equipmer	Audio equipment	Speaker, Amplifier, IC recorder, MP3 player, Headsets, etc.	L 2	12	0	1	1	0	0	0	0	0	0
udio visual	Video/Camera equipment	Digital video cameras, Web cameras, Network cameras, Video players, Photo frames, Digital-camera, etc.	I 2	i 2	0	4	4	0	1	1	4	3	7
V	Others	Other Audio visual equipment	P 2	p 2	0	0	0	0	1	1	0	3	3
Copying Machine/ Compound equipment	-	Copying Machine/Compound equipment, etc.	S 2	s 2	0	0	0	1	0	1	0	0	0
t	Terminal	Mobilephone, Smartphone, PHS telephones	Т 2	t 2	0	0	0	0	1	1	0	4	4
Equipmen	equipment	Telephone Equipment (PBX, FAX, Key Telephone System, etc.), Cordless telephones	U 2	u 2	0	0	0	0	0	0	0	0	0
nications	Network related	Network Channel Terminating Equipment (Modem, Digital Transmission Equipment, DSU, TA, etc.)	V 2	v 2	0	0	0	0	0	0	0	0	0
Commu	equipment	LAN Equipment (Rooter, HUB, etc.), Switching-node, etc.	W 2	w 2	7	1	8	24	1	25	39	3	42
	Others	Other Communications Equipment	X 2	x 2	0	0	0	0	2	2	2	2	4
d ent	Electronic stationeries	Electronic dictionaries, Electronic book readers, etc.	D 2	d 2	0	0	0	0	0	0	0	0	0
nent an equipm	Electronic toys	Game machines, Game pads, Toy drones, etc.	Y 2	y 2	0	1	1	0	1	1	0	1	1
Entertaim	Lighting control equipment for entertainment	Lighting control equipment for entertainment	Z 2	z 2	0	0	0	0	0	0	0	0	0
°20	Others	Others (Navigator, etc.)	F 2	f 2	5	0	5	0	0	0	0	0	0
Others			O 2	o 2	0	2	2	5	1	6	5	0	5
Total					36	57	93	50	70	120	90	104	194

State of Registration of Measurement Facilities (Newly registered or renewed)

The following table indicates the status on registration of measuring facilities in the most recent three months. Facilities listed here are only those made open by registering members in principle. Members with those facilities whose valid period expired are kindly advised to contact VCCI to inform of the status they are in. Status to choose from are, renewal application being filed, new application being filed, waiting for the next issue to carry, or terminating the registration (all facilities are posted in the Web site).

Facilities in Japan are listed in Japanese.

List of newly registered or renewed facilities (May 2017 – July 2017)

R: Field strength measuring facility C: Mains Port Conducted interference measuring facility T: Communication Port Conducted interference measuring facility G: Radiated EMI measurement facilities above 1GHz

Company name	Equipment name	3 m	10 m	30 m	Dar k 3m	Dar k 10m	Registration number	Effective date	Location	Contact to:
SGS Taiwan Ltd.	Wuku 6F Conduction Site	-	-	-	-	-	C-4921	2020/2/19	No.134, Wu Kung Road, Wuku Industrial Zone, Wuku District, New Taipei City, Taiwan	886-2-22993279
SGS Taiwan Ltd.	Wuku 6F Conduction Site	-	-	-	-	-	T-2398	2020/2/19	No.134, Wu Kung Road, Wuku Industrial Zone, Wuku District, New Taipei City, Taiwan	886-2-22993279
DEKRA Testing and Certification Co., Ltd.	Hsin Chu Laboratory CB4-H	-	-	-	0	-	R-4455	2020/5/21	No.372, Sec.4, Zhongxing Rd., Zhudong Township, Hsinchu County 310, Taiwan 31061	886-3-582-8001E xt.3565
DEKRA Testing and Certification Co., Ltd.	Hsin Chu Laboratory (Shielding Room) SR2-H	-	-	-	-	-	C-4932	2020/5/21	No.372-2, Sec.4, Zhongxing Rd., Zhudong Township, Hsinchu County 310, Taiwan 31061	886-3-582-8001E xt.3565
DEKRA Testing and Certification Co., Ltd.	Hsin Chu Laboratory (Shielding Room) SR2-H	-	-	-	-	-	T-2402	2020/5/21	No.372-2, Sec.4, Zhongxing Rd., Zhudong Township, Hsinchu County 310, Taiwan 31061	886-3-582-8001E xt.3565
TUV SUD PSB Pte Ltd	EMC IBP LAB	-	-	-	-	-	C-4933	2020/5/21	13 International Business Park #01-01, Singapore 609932	65-68851451
TUV SUD PSB Pte Ltd	EMC IBP LAB	-	-	-	-	-	T-2403	2020/5/21	13 International Business Park #01-01, Singapore 609932	65-68851451
Centre Testing International Group Co., Ltd.	Centre Testing International Group Co., Ltd.	-	-	-	-	-	C-20007	2020/3/20	Hongwei Industrial Zone, 70 Area, Baoan District, Shenzhen, Guangdong, China	86-0755 33681398
Centre Testing International Group Co., Ltd.	Centre Testing International Group Co., Ltd.	-	-	-	-	-	T-20008	2020/4/16	Hongwei Industrial Zone, 70 Area, Baoan District, Shenzhen, Guangdong, China	86-0755 33681398
Mellanox Technologies, Ltd.	3m Full compliance EMC chamber	-	-	-	0	-	R-20003	2020/5/21	Hatnufa 3, Ofer Industrial Park, Yokneam, Israel 2069207	972747129254
株式会社 広島テクノ プラザ	第1大型電波暗室	-	-	-	-	-	T-20010	2020/5/21	広島県東広島市鏡山 3 丁目 13 番 26 号	082-420-0500
Centre Testing International Group Co., Ltd.	Centre Testing International Group Co., Ltd.	-	-	-	0	0	R-20005	2020/6/14	Hongwei Industrial Zone, 70 Area, Bao'an District, Shenzhen, Guangdong, China	86-0755 33681398

Company name	Equipment name	3 m	10 m	30 m	Dar k 3m	Dar k 10m	Registration number	Effective date	Location	Contact to:
Centre Testing International Group Co., Ltd.	Centre Testing International Group Co., Ltd.	-	-	-	0	-	R-20006	2020/6/14	Hongwei Industrial Zone, 70 Area, Bao'an District, Shenzhen, Guangdong, China	86-0755 33681398
Centre Testing International Group Co., Ltd.	Centre Testing International Group Co., Ltd.	-	-	-	-	-	G-20021	2020/6/14	Hongwei Industrial Zone, 70 Area, Bao'an District, Shenzhen, Guangdong, China	86-0755 33681398
UL Verification Services (Guangzhou) Co., Ltd., Song Shan Lake Branch	Shielding Room B	-	-	-	-	-	C-20012	2020/6/14	Room 204, Building 10, Innovation Technology Park, Song Shan Lake Hi tech Development Zone,Dongguan, Guangdong Province, China	86 769 33817100
UL Verification Services (Guangzhou) Co., Ltd., Song Shan Lake Branch	Chamber D	-	-	-	-	-	G-20019	2020/6/14	Room 204, Building 10, Innovation Technology Park, Song Shan Lake Hi tech Development Zone,Dongguan, Guangdong Province, China	86 769 33817100
UL Verification Services (Guangzhou) Co., Ltd., Song Shan Lake Branch	Chamber D	-	-	-	0	-	R-20004	2020/6/14	Room 204, Building 10, Innovation Technology Park, Song Shan Lake Hi tech Development Zone,Dongguan, Guangdong Province, China	86 769 33817100
UL Verification Services (Guangzhou) Co., Ltd., Song Shan Lake Branch	Shielding Room B	-	-	-	-	-	T-20011	2020/6/14	Room 204, Building 10, Innovation Technology Park, Song Shan Lake Hi tech Development Zone,Dongguan, Guangdong Province, China	86 769 33817100
Mellanox Technologies, Ltd.	3m Full compliance EMC chamber	-	-	-	-	-	G-20018	2020/6/14	Hatnufa 3, Ofer Industrial Park, Yokneam, Israel 2069207	972747129254
DEKRA Testing and Certification Co., Ltd.	СВ4-Н	-	-	-	-	-	G-20017	2020/6/14	No.372, Sec. 4, Zhongxing Rd., Zhudong Township, Hsinchu County 310, Taiwan 31061,R.O.C.	886-3-582-8001
Mellanox Technologies, Ltd.	Immunity laborotory	-	-	-	-	-	C-20011	2020/6/14	Hatnufa 3, Ofer Industrial Park, Yokneam, Israel 2069207	972747129254

• VCCI Events Calendar

FY2017

April • Exhibition at TECHNO FRONTIER	May • Exhibition at COMPUTEX TAIPEI	June • Release VCCI Dayori No.125
July • VCCI Business Reporting Meeting • Release Annual Report	August	September • VCCI Training Basic Course for Measurement Engineers • Release VCCI Dayori No.126
October • VCCI Course for Measurement Engineers up to 1GHz • Exhibition at CEATEC JAPAN • VCCI International Forum	November	December • VCCI Seminar on Automated and Manual Measurement • Release VCCI Dayori No.127

Before putting down a pen

Things representing the summer seasons

The summer is a season which some people have a fancy for but some other people dislike. What are the natural or cultural properties of the summer which come to your minds? Here I am listing up things reminding me of or connecting me with the summer now and in the past.

They are morning glory, sunflower, green soy-beans, open air beer bars, obon of Buddhism, home-coming, sea-bathing, swimming pool, matting, mosquito-repellent incense, high school baseball tournament, watermelon, sohmen-noodle, summer festival, yoyo hooking, mountain climbing (my relatives used to take me to the Hakusan mountain), fireworks, firefly, bon-odori dance, summer evening shower, morning radio gymnastics, pictorial diary and free research as a summer project to name just a few.

While I was listing those things up a clear image came back to me. That was a vivid image of my summer when I spent my vacation in my grandparents' house with scent of mosquito-repellent incense. There I was joyfully engaged in various activities including radio gymnastics in the morning, eating watermelons and sohmen noodles, mingling in summer festivals and so on and so forth. Firefly watching and playing in swimming pool among others are still vividly kept in my memory even today.

I feel the true summers in me are those of the Showa era, the days of my childhood, which the scent of mosquito repellent takes me back to. Today, however, things relates me to the summer is only the boiled soybeans and beer gardens. I was surprised with my own memory retaining so many things around me in my childhood in the summer, which are all unimaginable to do in my senile life today. In these days I am gradually getting away from the natural summer and spend in air conditioned rooms all day long as hot and humid environment is getting unbearable to me. It will be good if I live a summer life as when I was young, but the approaching fall is more welcome when I will be able to enjoy walking out around here and there. (N.H.)

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